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(54) Title: METHOD FOR OPTIMIZING THERAPEUTIC EFFICACY OF NEMORUBICIN

(57) Abstract: The present invention relates to products and methods for characterizing cancer patients in order to predict therapeutic benefit with a drug metabolized by CYP3A, especially nemorubicin.

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INTERNATIONAL SEARCH REPORT

International Application No.
EP 03/11180

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01N33/574 C12N9/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G01N C12N C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 088 900 A (EPIDAUROS BIOTECHNOLOGIE AG) 4 April 2001 (2001-04-04) paragraphs '0004!', '0005!', '0069! claims 26-39	1, 3, 5, 7, 9, 10
X	FRAIER D. ET AL.: "LC-MS-MS determination of nemorubicin (methoxymorpholinyl doxorubicin, PNU-152243A) and its 13-OH metabolite (PNU-155051A) in human plasma." J. PHARM. BIOMED. ANAL., vol. 30, 15 October 2002 (2002-10-15), pages 377-389, XP002274208	1, 2
Y	the whole document --- -/--	3-10

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
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- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- *G* document member of the same patent family

Date of the actual completion of the international search

19 March 2004

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16/04/2004

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INTERNATIONAL SEARCH REPORT

Patent Application No

PCT/EP 03/11180

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	RIVORY L.P. ET AL.: "Optimizing the Erythromycin Breath Test for use in cancer patients." CLIN. CANCER RES., vol. 6, September 2000 (2000-09), pages 3480-3485, XP002274209 cited in the application the whole document	1,3,5,7, 9,10
X	RIVORY L.P. ET AL.: "Hepatic cytochrome P450 3A drug metabolism is reduced in cancer patients who have an acute-phase response." BRIT. J. CANCER, vol. 87, 29 July 2002 (2002-07-29), pages 277-280, XP002274210 the whole document	1,3,5,7, 9,10
X	HIRTH J.A. ET AL.: "The effect of an individual's cytochrome CYP3A4 activity on docetaxel clearance." CLIN. CANCER RES., vol. 6, April 2000 (2000-04), pages 1255-1258, XP001121612 the whole document	1,3,5,7, 9,10
X	MARTINEZ C. ET AL.: "Expression of paclitaxel-inactivating CYP3A activity in human colorectal cancer : implications for drug therapy." BRIT. J. CANCER, vol. 87, 9 September 2002 (2002-09-09), pages 681-686, XP002274211 the whole document	1,3,5,7, 9,10
Y	QUINTIERI L. ET AL.: "In vivo antitumor activity and host toxicity of methoxymorpholiny] doxorubicin: role of cytochrome P450 3A." CANCER RES., vol. 60, 15 June 2000 (2000-06-15), pages 3232-3238, XP002274212 the whole document	1-10
Y	WO 01 58444 A (THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN) 16 August 2001 (2001-08-16) page 5, line 5 -page 6, line 22 page 9, line 11 - line 21 claims 1-21	1-10

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INTERNATIONAL SEARCH REPORT

Int.

nal Application No

T/EP 03/11180

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	<p>WO 02 088714 A (MCGILL UNIVERSITY) 7 November 2002 (2002-11-07) page 63 -page 64 page 80 -page 86 page 188 -page 193 page 199 -page 202 claims 1-79</p> <p>-----</p>	1-10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/11180

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 1-2, 5-8
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; It is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claims 1-2 and 5-8 are directed to a method of treatment of the human/animal body by surgery, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box I.1

Claims Nos.: 1-2, 5-8

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery

INTERNATIONAL SEARCH REPORT

International Application No
T/EP 03/11180

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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